

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 3021877 - Wafix PP Branch 45° GY 50x50x50 S/S/SP
 Unit: 1 piece
 Manufacturer: Wavin - PL -Buk - Extra products

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 08-06-2023
 End of validity: 08-06-2028
 Verifier: Martijn van Hövell - SGS Search



Wafix PP is a versatile, uncomplicated solution for your indoor drainage. You can easily install the impact-resistant pipes even in frost. Their excellent chemical resistance makes them ideal for cast-in applications.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - PL -Buk - Extra products (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.37E-1	1.07E-3	1.45E-4	1.38E-1	2.30E-3	1.84E-1	1.08E-3	-1.21E-1	2.05E-1
GWP-f	kg CO2 eq	2.35E-1	1.07E-3	1.46E-4	2.36E-1	2.30E-3	7.72E-2	1.08E-3	-1.34E-1	1.82E-1
GWP-b	kg CO2 eq	-9.82E-2	6.48E-7	-1.54E-6	-9.82E-2	1.40E-6	1.07E-1	9.44E-7	1.40E-2	2.24E-2
GWP-luluc	kg CO2 eq	2.48E-4	3.78E-7	1.49E-7	2.48E-4	8.14E-7	1.38E-5	1.85E-8	-1.81E-4	8.13E-5
ODP	kg CFC11 eq	1.09E-8	2.46E-10	8.26E-12	1.11E-8	5.30E-10	2.07E-9	2.72E-11	-7.79E-9	5.98E-9
AP	mol H+ eq	9.64E-4	6.08E-6	1.47E-6	9.72E-4	1.31E-5	8.53E-5	6.49E-7	-4.74E-4	5.97E-4
EP-fw	kg P eq	5.60E-6	8.78E-9	8.24E-9	5.61E-6	1.89E-8	4.04E-7	8.46E-10	-3.28E-6	2.76E-6
EP-m	kg N eq	1.86E-4	2.17E-6	1.55E-7	1.88E-4	4.69E-6	2.61E-5	4.22E-7	-9.70E-5	1.22E-4
EP-T	mol N eq	2.04E-3	2.40E-5	1.85E-6	2.06E-3	5.17E-5	2.87E-4	2.63E-6	-1.10E-3	1.30E-3
POCP	kg NMVOC eq	8.20E-4	6.85E-6	6.28E-7	8.28E-4	1.48E-5	8.92E-5	9.89E-7	-4.33E-4	4.99E-4
ADP-mm	kg Sb eq	6.44E-6	2.76E-8	1.97E-8	6.49E-6	5.95E-8	3.34E-7	6.54E-10	-1.06E-6	5.82E-6
ADP-f	MJ	7.24E+0	1.64E-2	1.36E-3	7.25E+0	3.53E-2	2.51E-1	1.99E-3	-3.83E+0	3.72E+0
WDP	m3 depriv.	1.47E-1	5.02E-5	5.22E-5	1.47E-1	1.08E-4	4.61E-3	1.00E-5	-8.68E-2	6.52E-2
PM	disease inc.	1.04E-8	9.63E-11	9.08E-12	1.05E-8	2.08E-10	1.37E-9	1.37E-11	-5.90E-9	6.15E-9
IR	kBq U-235 eq	5.97E-3	7.16E-5	1.02E-6	6.04E-3	1.54E-4	7.96E-4	9.21E-6	-3.26E-3	3.74E-3
ETP-fw	CTUe	4.13E+0	1.33E-2	1.21E-2	4.16E+0	2.87E-2	2.98E-1	1.66E-3	-2.10E+0	2.39E+0
HTP-c	CTUh	1.34E-10	4.73E-13	6.17E-13	1.35E-10	1.02E-12	3.57E-11	4.85E-14	-6.34E-11	1.08E-10
HTP-nc	CTUh	2.51E-9	1.58E-11	1.57E-11	2.54E-9	3.42E-11	4.28E-10	1.07E-12	-9.50E-10	2.05E-9
SQP	Pt	9.30E+0	1.40E-2	2.24E-3	9.32E+0	3.02E-2	1.97E-1	5.10E-3	-9.93E+0	-3.80E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.97E+0	2.35E-4	2.40E-2	1.99E+0	5.07E-4	1.19E-2	7.69E-5	-1.61E+0	3.96E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.97E+0	2.35E-4	2.40E-2	1.99E+0	5.07E-4	1.19E-2	7.69E-5	-1.61E+0	3.96E-1
PENRE	MJ	7.76E+0	1.74E-2	1.44E-3	7.78E+0	3.75E-2	2.68E-1	2.11E-3	-4.12E+0	3.97E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.76E+0	1.74E-2	1.44E-3	7.78E+0	3.75E-2	2.68E-1	2.11E-3	-4.12E+0	3.97E+0
PET	MJ	9.73E+0	1.76E-2	2.55E-2	9.78E+0	3.80E-2	2.79E-1	2.18E-3	-5.73E+0	4.37E+0
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	2.60E-3	1.85E-6	1.46E-6	2.61E-3	4.00E-6	1.42E-4	2.45E-6	-1.61E-3	1.14E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.25E-6	4.19E-8	2.73E-13	2.29E-6	9.03E-8	4.35E-7	2.39E-9	-1.75E-6	1.06E-6
NHWD	kg	1.79E-2	1.01E-3	1.05E-6	1.89E-2	2.19E-3	1.26E-2	8.75E-3	-8.06E-3	3.44E-2
RWD	kg	5.99E-6	1.11E-7	1.10E-13	6.11E-6	2.40E-7	1.03E-6	1.30E-8	-3.19E-6	4.20E-6
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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